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DATE(S) ISSUED:

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SUBJECT:

A Vulnerability in Mozilla Firefox Could Allow for Arbitrary Code Execution

OVERVIEW:

A vulnerability has been discovered in Mozilla Firefox, Firefox Extended Support Release (ESR) and Mozilla Thunderbird, which could allow for arbitrary code execution. Mozilla Firefox is a web browser used to access the Internet. Mozilla Firefox ESR is a version of the web browser intended to be deployed in large organizations. Mozilla Thunderbird is an email client. Successful exploitation of this vulnerability could allow for arbitrary code execution. Depending on the privileges associated with the user an attacker could then install programs; view, change, or delete data; or create new accounts with full user rights. Users whose accounts are configured to have fewer user rights on the system could be less impacted than those who operate with administrative user rights.

THREAT INTELLIGENCE:

There are currently no reports of these vulnerabilities being exploited in the wild.

SYSTEMS AFFECTED:

- Mozilla Firefox versions prior to 82.0.2
- Mozilla Firefox ESR versions prior to 78.4.0
- Mozilla Thunderbird versions prior to 78.4.1

RISK:

Government:

- Large and medium government entities: **High**
- Small government entities: **Medium**

Businesses:

- Large and medium business entities: **High**
- Small business entities: **Medium**

Home users: Low

TECHNICAL SUMMARY:

A vulnerability has been discovered in Mozilla Firefox and Mozilla Firefox ESR, the most severe of which could allow for arbitrary code execution. Mozilla Firefox is a web browser used to access the Internet. Mozilla Firefox ESR is a version of the web browser intended to be deployed in large organizations. Thunderbird is an email client. Details of the vulnerability are as follows:

- In certain circumstances, the MCallGetProperty opcode can be emitted with unmet assumptions resulting in an exploitable use-after-free condition. (CVE-2020-26950) Successful exploitation of this vulnerability could allow for arbitrary code execution. Depending on the privileges associated with the user an attacker could then install programs; view, change, or delete data; or create new accounts with full user rights. Users whose accounts are configured to have fewer user rights on the system could be less impacted than those who operate with administrative user rights.

RECOMMENDATIONS:

The following actions should be taken:

- Apply appropriate updates provided by Mozilla to vulnerable systems, immediately after appropriate testing.
- Run all software as a non-privileged user (one without administrative privileges) to diminish the effects of a successful attack.
- Remind users not to visit un-trusted websites or follow links provided by unknown or un-trusted sources.
- Inform and educate users regarding the threats posed by hypertext links contained in emails or attachments especially from un-trusted sources.
- Apply the Principle of Least Privilege to all systems and services.

REFERENCES:

Mozilla:

<https://www.mozilla.org/en-US/security/advisories/mfsa2020-49/>

CVE:

<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2020-26950>

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